

Keswick
Urban Sanitary District.

ANNUAL REPORT

OF THE


Medical Officer of Health

FOR THE YEAR 1909.

KESWICK :

H. SLADE WILSON.

1910.



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Report of the Medical Officer of Health, for the Year 1909.

TO THE KESWICK URBAN DISTRICT COUNCIL.

GENTLEMEN,

I have the honour to present to you my Annual Report on the health of the District for the year 1909, and, at the outset, have pleasure in stating that for at least the last ten years the health statistics have never been so good.

The most telling figures taken from the appended tables show—

- (1) That the Death-rate now stands as low as 12·2 per 1,000, the population being calculated at 4,500, and the number of deaths being 55.
- (2) That the Infantile Mortality, *i.e.*, the number of deaths of infants under one year per 1,000 births, has fallen to 60·2—there having been only five deaths, and two of these due to premature birth. Such a low mortality is, perhaps, the best criterion of the health conditions of a district, and among the causes contributing to it may be: a low birth-rate; only two illegitimate births; little, if any, whooping cough; very little measles; no epidemic diarrhoea, and the very slight extent to which married women are employed in industrial occupations.
- (3) As shown by Tables III. and IV., the number of infectious diseases notified has been particularly small and their mortality *nil*.

Describing the General Physical and other features of the district as is expected in this Report, I must state that the town is situated in a valley some 300 feet above sea level, having for its foundation a sub-soil consisting chiefly of glacial drift or leek of varying depths, overlying the Skiddaw slate, with, in parts, alluvial deposits or masses of boulder clay. The houses are built for the most part of hard volcanic rock, and are planned with a view to providing accommodation for summer visitors. There are, however, a number of cottages, both bad and good, and to these will shortly be added twenty-five workmen's model dwellings which are being built on high-lying ground with an abundance of air and space about them. Plans have also been passed for eleven other houses, mostly of the cottage type, while existing property has been improved, in many instances by alteration, addition, and the provision of a number of washhouses. The occupations of the inhabitants vary but little, consisting as they do of pencil-making, quarrying, lead-mining, brass and copper repoussé work, and the summer occupation of boating and driving.

Referring more particularly to the Sanitary Conditions of the district and the improvements which have been achieved, much labour has been spent in improving the surface and drainage of streets and footpaths, thus tending in some measure to lessen the dust nuisance, for which purpose also a solution of calcium chloride was used in the water-carts during the summer months with considerable success.

The excellent supply of Pure Water derived from reservoirs on the breast of Skiddaw has proved ample and uncontaminated, and, though a particularly soft water, is found to have practically no plumbo solvent action. The reservoirs at Millbeck, Underscar and Ormathwaite have been regularly emptied and cleaned out, while the gathering ground streams and springs are under constant supervision. Nineteen new services have been laid, and a large number re-laid and repaired. Waste is prevented as far as possible by the vigilance of the Sanitary Inspector and Council's plumber.

Milk is supplied by dairies situated partly within and partly outside the district, but all are under the supervision of the Veterinary Inspector, who makes periodical visits and reports. In one of these reports, he states that in a certain byre the air space is insufficient, and in another he congratulates the town on having milk from such good healthy cattle. Notwithstanding the fact that for a good part of the year the cattle are on grass, the air space and ventilation in several instances seem to me to be inadequate, and the cleanliness of the cattle themselves not sufficiently attended to.

The Slaughter Houses have been regularly inspected and found clean and conforming to the bye-laws. No unsound meat has been found exposed for sale, nor has any carcase been condemned on account of tuberculosis.

Vendors of Ice Creams were much in evidence during the summer months, but as one of the chief dangers of these "creams" lies in the insanitary conditions under which they are often made and stored before being brought into the district it is almost impossible to deal thoroughly with the trade at its source.

Sewerage. A portion of the Main Sewer near the out-fall has been re-laid, and 250 yards of new 9in. sewer has been laid in Richardson's Lane, Greta Side, and Millbank Field, in order to drain the Derwentwater Tenants' Building Estate, and make provision for Greta Side—the Pencil Works, Greta Hall and Greta Lodge—connections which should be completed at the earliest possible moment.

Blocked Sewers have been cleared in Lake Road, Woolpack Court, Borrowdale Road and Station Road, and nine house drains in addition.

The condition of the sewers is good, and of the newer house drains also.

Sewage Disposal. At the Disposal Works a new storm-water over-flow has been laid on to the old irrigation land. The pumping station, receiving tanks, septic tanks and filters have all worked well and been kept in good repair.

House Refuse. Ashpits are now practically abolished, and House Refuse is collected from dustbins by the Council's servants twice a week or oftener where necessary. It would be a great gain if householders would burn all their own animal and vegetable refuse and use sanitary dustbins for the rest.

Several nuisances caused by blocked drains and insanitary engineering (waste pipes discharging into soil pipe and the latter wrongly placed inside a building or improperly ventilated), have been dealt with, and there is a tendency to put too many angles on a ventilating shaft, or to make it of smaller diameter than the soil pipe which it ventilates.

Other nuisances, arising from fish offal and middens have been abated, but there are still middens in existence where the absence of a proper concrete floor is apt to give rise to trouble.

No offensive trades are carried on in the district, and the condition of the Common Lodging Houses is unchanged.

Schools. The Sanitary Condition of the Schools is excellent as regards water supply and drainage system, and the work of the School Medical Officer (who is also the County Medical Officer of Health), in examining and reporting on the health of the children, is already bearing good fruit.

There has been no school epidemic during the year.

Infectious Disease.

Diphtheria. An odd case without definite origin was notified in April and removed to hospital, where rapid recovery took place. Four further cases appeared in December. Two of these had no connection by school or otherwise, but the last two had been in contact with each other, and it was impossible to say which developed the disease first, as the second was so mild as to escape notice until almost well, and was then only notified on the strength of bacteriological evidence—thus proving the value of this method of diagnosis, the expense of which is still borne by the Council, as well as that of the supply of antitoxin.

In all these last four cases home isolation was sufficient, so that removal to hospital was deemed unnecessary.

The usual means to prevent the spread of the disease were adopted with satisfactory results, *e.g.*, isolation, disinfection, notification of schools with exclusion of sufferers and contacts until allowed to return on medical certificate.

Scarlet Fever. Four cases were notified in August and one in December. They came from widely separated parts of the district and had no common origin—nor did they infect others. All were promptly removed to hospital, and in one case where the danger of school infection seemed imminent, Standards I. and II., the child's companions, were excluded from school attendance for a week.

Measles is not a notifiable disease in this district, but acting upon information kindly supplied by a head-master, I was able to deal with a sudden outburst among children resident in Gatey's Court.

It appeared that one of these had contracted the disease while absent from home. Shortly afterwards, there were at least five other houses infected, and the means used to prevent the schools becoming infected was to exclude all children from this locality for a week. It is probable that by this means an epidemic was averted.

Tuberculosis. Phthisis is still voluntarily notifiable except in cases under the poor law which, according to a recent order of the Local Government Board, must be notified. None, however, have been, and the disease seems to be less prevalent than in former years. Of the phthisis deaths only one really belonged to the district. By endeavouring to control the meat and milk supply at their source—a somewhat difficult matter where there are private slaughter houses and many milk purveyors—by isolation of one case at least in the Keswick bed of the Blencathra Sanatorium, by supplying disinfectants and disinfecting rooms and clothing after death as well as by the warnings as to the dangers of infection which medical men always give, it may be hoped that this disease may soon become even less common than it is.

Other causes of death are shown in Table IV. and the rates of mortality under the different headings as shown in Table VI., compare very favourably with those of the County as a whole.

Cancer and heart diseases, however, are still very prevalent, and give rates of 1·3 and 3·3 respectively.

The Factories, Workshops and Bakehouses have been regularly inspected and the orders of H.M. Inspector carefully noted and acted upon.

In one case insufficient sanitary accommodation was reported, and the matter is now receiving attention. In another having been found unsuitable, the question was referred to H.M. Inspector.

On another occasion, we found that the occupier had neglected to affix an Abstract of the Factory and Workshop Act (S. 133), as required; but no prosecution for this or any other cause has been found necessary.

There are on the Register 41 Workshops and 14 Bakehouses—none of these latter are underground—of Outworkers there are none.

Sect. 22 of the Public Health Act (Amendment) Act, 1890, is in force in the district, also Parts II., III., IV., V. and X., of the Public Health Acts (Amendment) Act, 1907. The Midwives Act is not in operation as there are no registered Midwives practising as such.

In making inspection of the district, as in most of my sanitary work, I have had the kind co-operation and assistance of the Sanitary Inspector whose help I wish now to acknowledge. I have further to thank Mr. A. Mitchell Dawson, for again allowing me to make use of his record of rainfall, and Mr. H. Swinburn for the use of his observations on sunshine.

Your obedient servant,

J. R. BURNETT,

Medical Officer of Health.

RAINFALL IN 1909.

The gauge funnel is 5in. in diameter, it is placed 7in. above ground, and 296ft. above sea level.

Month.	Total Depth.			Greatest fall in 24 hours.			No. of days on which '01 or more recorded.	
		Inches.		Inches.		Date.		
January	...	6'35	...	1'42	...	17th	...	18
February	...	4'48	...	1'31	...	3rd	...	12
March...	...	4'12	...	'58	...	6th & 29th	...	22
April	3'04	...	'63	...	24th	...	18
May	1'99	...	'34	...	24th	...	12
June	3'31	...	'86	...	22nd	...	14
July	6'44	...	'96	...	24th	...	22
August	...	3'50	...	'99	...	15th	...	18
September	...	3'14	...	'80	...	27th	...	13
October	...	12'39	...	1'71	...	19th	...	23
November	...	3'12	...	'91	...	28th	...	13
December	...	8'24	..	1'24	...	9th	...	23
Total...		60'12						208

Average yearly rainfall here for past 36 years, 58'515in. upon 208'03 days.

Highest yearly rainfall here for past 37 years, 84'57in. upon 252 days in 1903. Lowest do., 42.34in. upon 172 days in 1887.

SUNSHINE RECORD—1909.

		Hrs. Min.		Days.	
January	...	38	5	on	13
February	...	77	50	„	17
March	...	88	20	„	19
April	...	177	25	„	26
May	...	245	55	„	30
June	...	165	55	„	25
July	...	135	5	„	25
August	...	167	40	„	26
September	...	133	5	„	25
October	..	61	5	„	20
November	...	71	50	„	17
December	...	40	5	„	14

Total Sunshine for 1909 ... 1,402 20 257

Average for past seven years—1,295 hrs. 25 mins. on 268 days.

WHINLATTER HOSPITAL.

Only six cases have been admitted, the first (one of Diphtheria) in April, was discharged after fifteen days on the throat being proved free from infection.

In August there were four and in December one case of Scarlet Fever. These remained in hospital for an average of 36·8 days each, the last leaving on December 30th, and were all under the care of their own medical attendant.

The cooking accommodation having been found inadequate when the hospital was full, a small accessory range has been placed in the back kitchen. It has also been found necessary to re-build the retaining and terrace wall as well as to do some repairs to the kitchen steps, doors, windows and fence wall.

The duties of caretakers and nurses have been most efficiently and conscientiously performed. Since 1897, when the Hospital was first opened, up to the present time there have been treated 99 cases of Scarlet Fever, and 16 of Diphtheria, without a death, a record due largely to the healthy situation and equipment of the building as well as to the care bestowed upon the patients. Inaccessibility is the one drawback, and this would be greatly minimised by the establishment of telephonic communication, if only this could be arranged.

The White Moss Smallpox Hospital has never yet been in use, but is none the less a necessary guardian of the Public Health, especially in times when so many children are escaping vaccination. Its life has been prolonged by recent tarring of the walls and tarring and felting of the roof.

I am, Gentlemen,

Your obedient servant,

J. R. BURNETT,

Medical Superintendent.

Vital Statistics of whole District during 1909 and Previous Years.

TABLE I.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				Deaths of Non- residents register'd in Public Institu- tions in the District.			Deaths of Resid'nts register'd in Public Institu- tions beyond the District.		NETT DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
		Num- ber.	Rate.*	Under 1 Year of Age.		At all Ages.		Total Deaths in Public Institu- tions in the District.	Deaths of Non- residents register'd in Public Institu- tions in the District.	Deaths of Resid'nts register'd in Public Institu- tions beyond the District.	Num- ber.	Rate.*		
				Num- ber.	Rate per 1,000 Births register'd	Num- ber.	Rate.*							
1	2	3	4	5	6	7	8	9	10	11	12	13		
1899	4451	113	25·38	7	61·95	62	13·92	6	0					
1900	4451	99	22·24	15	151·52	78	15·27	1						
1901	4451	102	22·91	16	156·86	59	13·25	5	3	1	57			
1902	4451	89	19·99	7	78·65	59	13·25	3	3	0	64			
1903	4451	119	26·73	18	151·26	67	15	3	3	0	63			
1904	4451	94	21·11	11	117·02	63	14·15	2	0	0	64			
1905	4451	107	24·03	11	102·8	65	14·6	6	3	2	62			
1906	4451	86	19·31	10	116·27	65	14·6	5	3	0	63			
1907	4451	101	22·69	12	118·81	61	13·7	5	2	4	73			
1908	4500	90	20	12	133·3	70	15·5	6	0	3				
Averages for years 1899-1908	4455	100	22·43	11·9	118·84	64·9	14·32	4·3	1·7	1·4	63·5			
1909	4500	83	18·4	5	60·2	55	12·2	2	0	1	55	12·2		

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

NOTE.—The deaths included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term “Non-residents” is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term “Residents” is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The “Public institutions” taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums. A list of the Institutions in respect of the deaths in which corrections have been made are given on the back of this Table.

Area of District in acres }
(exclusive of area } 1,068
covered by water.) }

Total population at all ages, 4,451..... }
Number of inhabited houses, 1,093 }
Average number of persons per house, 4·11 } At Census of 1901.

I. Institutions within the District receiving sick and infirm persons from outside the District.	II. Institutions outside the District receiving sick and infirm persons from the District.	III. Other Institutions, the deaths in which have been distributed among the several localities in the District.
Mary Hewetson Cottage Hospital	Whinlatter Isolation Hospital White Moss Smallpox Hospital Workhouse (Cockermouth) County Lunatic Asylum Cumberland Infirmary Silloth Convalescent Home Edinburgh Royal Infirmary Home for Incurables (Carlisle) Blencathra Sanatorium for Consumptives	Crichton Royal Institute, Dumfries
Is the Union Workhouse within the District? No.		

TABLE III.

**Cases of Infectious Disease notified during the
Year 1909.**

Notifiable Disease.	CASES NOTIFIED IN WHOLE DISTRICT.							Removed to Hospital.
	At all Ages.	At Ages—Years.						
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards	
Small-pox								
Cholera								
Diphtheria (including Membranous croup)	5							1
Erysipelas ...	1							
Scarlet fever ...	5							5
Typhus fever ...								
Enteric fever ...								
Relapsing fever ...								
Continued fever ...								
Puerperal fever ...								
Plague								
Totals	11							6

Isolation Hospital, Whinlatter, Cockermouth Rural District. Total available beds, 10 ; number of Diseases that can be concurrently treated, 2.

Small-pox Hospital, White Moss, Cockermouth Rural District. Total available beds, 4 ; number of Diseases that can be concurrently treated, 1.

TABLE IV.**Causes of, and ages at, Death during Year 1909.**

CAUSES OF DEATH. 1	DEATHS AT THE SUBJOINED AGES.							Total Deaths in Public Institu- tions.
	All Ages. 2	Under 1 year 3	1 and under 5 4	5 and under 15 5	15 and under 25 6	25 and under 65 7	65 and up- wards 8	
Small-pox								
Measles								
Scarlet fever								
Whooping cough								
Diphtheria (including Membranous croup)								
Croup								
Fever { Typhus								
{ Enteric								
{ Other continued								
Epidemic influenza								
Cholera								
Plague								
Diarrhœa	1						1	
Enteritis	1						1	
Gastritis								
Puerperal fever								
Erysipelas								
Phthisis (Pulmonary Tuberculosis)	2					2		
Other tuberculous diseases	1					1		
Cancer, malignant disease	6					4	2	1
Bronchitis	4					1	3	
Pneumonia	5	1				3	1	
Pleurisy								
Other diseases of Respiratory organs	1					1		
Alcoholism ... }								
Cirrhosis of liver }								
Venereal diseases								
Premature birth	2	2						
Diseases and accidents of parturition								
Heart Disease	15					6	9	
Accidents	3				1	1	1	1
Suicides	1					1		
Apoplexy	3					1	2	
All other causes	10	2	1			4	3	
All causes	55	5	1		1	25	23	2

TABLE V.

Infantile Mortality during the Year 1909.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.				Und'r 1 Week	1—2 Weeks	2—3 Weeks	Total under 1 Month	1—2 Months	2—3 Months	3—4 Months	4—5 Months	5—6 Months	6—12 M'nths	Tot'l Deaths under 1 Year
All Causes	{	Certified	...	1	1			2				1		5
		Uncertified	...											
Common Infectious Diseases.	{	Small-pox	...											
		Chicken-pox	...											
Diarrhoeal Diseases.	{	Measles	...											
		Scarlet Fever	...											
Wasting Diseases.	{	Diphtheria (inc. Mem. Croup)	...											
		Whooping Cough	...											
Tuber-culous Diseases.	{	Diarrhoea, all forms	...											
		Enteritis, Muco-enteritis, Gastro-enteritis	...											
Other Causes.	{	Gastritis, Gastro-intestinal Catarrh	...											
		Premature Birth	...	1	1									2
Tuber-culous Diseases.	{	Congenital Defects	...											
		Injury at Birth	...											
Other Causes.	{	Want of Breast-milk, St'rv't'n Atrophy, Debility, Marasmus	...					1						1
		Tuberculous Meningitis	...											
Tuber-culous Diseases.	{	Tuberculous Peritonitis; Tabes Mesenterica	...											
		Other Tuberculous Diseases	...											
Other Causes.	{	Erysipelas	...											
		Syphilis	...											
Other Causes.	{	Rickets	...											
		Meningitis (not Tuberculous)	...					1						1
Other Causes.	{	Convulsions	...											
		Bronchitis	...											
Other Causes.	{	Laryngitis	...											
		Pneumonia	...											
Other Causes.	{	Suffocation, overlying	...								1		1	
		Other Causes	...											
				1	1			2			1		5	

Population—Estimated to middle of 1909—4,500.

Births in { legitimate, 81. | Deaths in the { legitimate infants, 4.
the year { illegitimate, 2. | year of { illegitimate „ 1.

Deaths from all Causes at all Ages, 5.

TABLE VI.

	Annual Rate per 1,000.	
	County of Cumberland 1908.	KESWICK. 1909.
Birth Rate	26·04	18·4
Death Rate	14·9	12·2
Zymotic Death Rate	0·95	0·4
Infant Mortality Rate (per 1,000 Births)...	126 1·26	60·2
Small-pox	nil	nil
Scarlet Fever	0·05	nil
Diphtheria and Membranous Croup	0·15	nil
“ Fever ” (Enteric and Continued)...	0·13	nil
Measles	0·03	nil
Whooping Cough	0·41	nil
Diarrhoea	0·16	0·4
Phthisis	1·01	0·4
Other Tuberculous Diseases... ..	0·48	·2
Respiratory Diseases (excluding Phthisis)...	2·44	2·2